REMARKS

Claims 19-34 are pending in the above-identified application. Claims 1-18 have been cancelled. Support for these new claims is found in the original claims, as well as at pages 4, 6 and 10 (lines 4-10) of the present specification and Figure 5 showing an embodiment of the distribution plate.

Previous Issues under 35 USC 103(a)

The last Office Action of December 4, 2008 rejected all of the previously pending claims under 35 USC 103(a) as being unpatentable over various combinations of Rhee '149 (US 4,933,149), Veariel '532 (US 6,838,532), Yokoyama '879 (US 4,578,879), Yamamoto '798 (EP 0 721 798) and Haeberle '205 (GB 1,014,205).

It is submitted that the present claims patentably define over these references based on the following reasons.

Present Invention

In a conventional polymerization process the particles contained in the fluidized bed are reactive. The inventors have found that the growing polymer particles, especially those having a small particle size, tend to adhere to the surfaces, such as the reactor wall. They then continue to grow at the wall forming large agglomerates which subsequently fall into the fluidized bed causing process disturbances. For instance, the agglomerates may plug the outlet of the reactor. Traditionally this problem has been addressed by introducing antistatic agents into the reactor, which are suppose to eliminate the adhering tendency. The present inventors have found that by producing a gas stream sweeping along the periphery of the reactor walls and having a sufficient velocity it was possible to prevent these particles from adhering to the reactor walls. This is achieved by employing a distribution plate with an annular opening which allows for at least 30% of the total gas flow to be conducted along the periphery of the reactor walls. By employing the above-described features, the method and device of the present invention advantageously suppress the formation of the agglomerates at the wall or near the distributor plate so as to

provide for stable operation. This is evidenced by the description of the Example at pages 10-11 of the present specification.

The present inventors found that when they operated prior art gas phase reactors they, from time to time, encountered the "chunking" problem. More specifically, they found that chunks were formed in the reactor which consequently plugged the polymer outlet or the downstream equipment. Usually the only way to overcome the problem was to shut down and clean the reactor. Often these problems started during grade transitions. However, their origin was not clear. The inventors then made an intensive study, including calculations of flow patterns in the gas phase reactor, and found that stagnant zones were formed at the level of the fluidization grid at the wall of the reactor. They also found that the known designs of fluidization grid could not overcome the problem. Thereby they came to the present invention where a gas flow is directed to pass the fluidization grid at the wall. After installing the present invention in the pilot plant reactor they found that chunking reduced substantially and they could run long campaigns with many grade changes without problems.

The inventors agree that a significant reason for chunk formation was the stagnant zone formed at the edge limited by the reactor wall and the distribution grid. However, nothing in the prior art suggested that this would have been the case. Therefore the prior art provided a person skilled in the art had no basis for a motivation to arrive at the present invention. This is evident by the discussion regarding the distinctions over the cited references below.

Distinctions over Previously Cited References

Rhee '149 discloses a fluidized bed reactor which includes a periphery flow **33a** as shown in Figures 2-3 and discussed at columns 9-10. The reactor includes a distributor plate **28** as shown in Figure 4.

Rhee '149 fails to disclose or suggest a method or reactor structure which would allow for feeding at least 30% of a gas stream along the periphery of the inside reactor walls, as in the present invention. Note that the distributor plate of the reactor of Rhee '149 does not have sufficient opening to allow for this to occur. Consequently, significant patentable distinctions exist between the present invention and Rhee '149.

Similar to the above-noted distinctions, it is also apparent from the distributor plate **12** in Yokoyama '879 in Figure **1**, the distributor plate **2** in Figure 2 of Yamamoto '798, and the distributor plate in Figure 4 having iron bars **41** of Haeberle '205 (having no actual annular opening along the interior reactor walls) that these distributor plates can not allow for 30% of the gas stream to be fed along periphery of the inside of the reactor walls past the distributor plate as in the present invention. Thus, significant patentable distinctions exist between the present invention and each of the Yokoyama '879, Yamamoto '798 and Haeberle '205 references similar to those discussed above with regard to Rhee '149. In addition, Veariel '532 fails to disclose or suggest this same feature.

It is submitted for the reasons above that the present claims define patentable subject matter such that this application should now be placed in condition for allowance.

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If any questions arise in the above matters, please contact Applicant's representative, Andrew D. Meikle (Reg. No. 32,868), in the Washington Metropolitan Area at the phone number listed below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37.C.F.R. §§1.16 or 1.17; particularly, extension of time fees.

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Respectfully submitted,

By_____

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